U.S. Department of Interior, Fish and Wildlife Service

Record of Decision

December 2013

Proposed Issuance of a Section 10(a)(1)(B) Incidental Take Permit to Beech Ridge Energy LLC and Beech Ridge Energy II LLC for the Beech Ridge Wind Energy Project

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This document should be cited as follows:

U.S. Fish and Wildlife Service. 2013. Record of Decision. Proposed Issuance of a Section 10(a)(1)(B) Incidental Take Permit to Beech Ridge Energy LLC and Beech Ridge Energy II LLC for the Beech Ridge Wind Energy Project.

This record of decision and all associated supporting documents, including but not limited to the applicants' Beech Ridge Wind Energy Project Habitat Conservation Plan, the Service's draft and final environmental impact statement, and Endangered Species Act section 7 biological opinion, are available on the Service's West Virginia Field Office website.

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I. INTRODUCTION

This record of decision (ROD) was developed by the U.S. Fish and Wildlife Service (Service or USFWS) in compliance with agency decision-making requirements of the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality's NEPA implementing regulations (40 CFR Part 1500), and the Department of the Interior's NEPA regulations (43 CFR Part 46). The purpose of this ROD is to document our NEPA decision regarding an application for a 10(a)(1)(B) incidental take permit (ITP) under the Endangered Species Act of 1973, as amended (ESA), by Beech Ridge Energy LLC and Beech Ridge Energy II LLC (referred to collectively as BRE or the Applicants).

This ROD: 1) presents our NEPA decision and the rationale for our decision; 2) identifies the alternatives considered in the final environmental impact statement (EIS) in reaching the decision, and identifies the preferred and environmentally preferred alternatives; and, 3) states whether all means to avoid or minimize environmental harm from implementation of the selected alternative have been adopted.

Our analyses for determining if the ESA section 10(a)(1)(B) issuance criteria for ITP issuance have been met are in the Findings and Recommendations on Issuance of an Incidental Take Permit (TE-16692B-0) to Beech Ridge Energy LLC and Beech Ridge Energy II LLC for the Beech Ridge Wind Energy Project Habitat Conservation Plan (USFWS 2013a). Other documents related to the ITP issuance decision are hereby incorporated by reference and include the final habitat conservation plan (FHCP) and implementing agreement (BRE 2013), final environmental impact statement (FEIS) (USFWS 2013b), section 7 biological opinion (BO) (USFWS 2013c), and responses to comments on the Draft Habitat Conservation Plan and Draft EIS (USFWS 2013d) (also included as Volume III of the FEIS).

II. PROJECT DESCRIPTION

Purpose and Need

The proposed action is the Service's issuance of an ITP to BRE for the federally endangered Indiana bat (*Myotis sodalis*) and Virginia big-eared bat (*Corynorhinus townsendii virginianus*) related to operation of wind turbines at a wind energy facility for a 25-year period. The primary purpose of our proposed action is to respond to BRE's ITP application. The application includes submission of a habitat conservation plan (HCP) which outlines the measures BRE will implement to minimize and mitigate the potential effects of incidental take of the covered species. In addition, the Service's purposes with regard to the proposed action include:

- Protecting, conserving, and enhancing Indiana and Virginia big-eared bats and their habitats for the continuing benefit of the people of the United States;
- Providing a means and taking steps to conserve the ecosystems upon which Indiana and Virginia big-eared bats depend; and
- Ensuring the long-term survival of Indiana and Virginia big-eared bats through protection and management consistent with the ESA, NEPA, and other applicable federal laws and regulations.

The need for this action is based on the potential that activities proposed by BRE will result in the incidental take of Indiana and Virginia big-eared bats, and thus their request for an ITP. Commercial wind facilities have been shown to cause high numbers of bat mortalities in many locations. There is a need to ensure that take of Indiana bats and Virginia big-eared bats is avoided and minimized to the maximum extent practicable and to ensure that the impact of any remaining take is mitigated. There is also a need to avoid and minimize disturbance to the habitat of Indiana bats, including their maternity areas, hibernacula, swarming areas near hibernacula, and nearby foraging and roosting habitat.

In responding to BRE's ITP application, we also must comply with NEPA. To this end, NEPA requires disclosure of the environmental effects for major Federal actions significantly affecting the quality of the human environment. Issuance of this ITP is a major Federal action that must comply with NEPA. We evaluated the effects of our action (ITP issuance) on the natural, physical, and social environment.

Project Overview

BRE submitted an application for a 25-year ITP for incidental take of Indiana and Virginia big-eared associated with a 100-turbine wind energy project in Greenbrier and Nicholas counties, West Virginia. The FHCP, which is a required part of the application analyzes effects to the species from construction, operations, maintenance, and decommissioning of the wind energy facility. The ITP would authorize the take of both species caused by collision with turbines or barotrauma. Other project activities may cause discountable or insignificant effects but will not rise to the level of take, and therefore would not be covered by the ITP.

The primary components of the HCP are summarized below, but are more fully described in the FHCP (BRE 2013).

Covered Activities

The applicant developed an HCP which includes the following activities for which BRE is requesting ITP coverage:

1) Operation of the existing 67 turbines (phase 1);
2) Construction of up to 33 additional turbines (phase II) and associated infrastructure, including construction of turbine assembly pads, construction of new access roads and improvement of existing access roads, use of an existing staging area and concrete batch plant, construction of underground electrical and communication cables, construction of 2 self-supporting unguyed meteorological towers, and construction of a supplemental 1.6-mile-long overhead transmission line;
3) Operation of the 33 (phase II) turbines;
4) Maintenance of each phase of the project, including turbine maintenance, maintenance of underground cable and communication lines, mowing of turbine plots and use of herbicides to control noxious weeds near turbines, and cutting of hazard trees in the transmission line and other project areas for safety reasons; and

5) Decommissioning of the entire 100-turbine project and associated facilities including, but not limited to, dismantling and removal of the turbines, foundations, and transformers; substation and transmission line; four meteorological towers; and an operation and maintenance (O&M) building, followed by site grading and restoration. Disturbed areas and access roads will be left in place or graded and returned to the original contour per the request of the landowner.

Of these activities, we determined in our BO (USFWS 2013c) that only turbine operations are anticipated to cause take, and thus the permit we issue will only authorize take from turbine operations.

The permit duration is 25 years from the effective date of the permit. Therefore, the authorized incidental take stemming from turbine operations will be a maximum of 25 years. But the two phases may operate for fewer years depending on how long it takes to construct phase II, and BRE's decisions regarding decommissioning and its timing. The minimum functional life of the turbines is 20 years, but the useful life of a particular turbine may vary. After 20 years of operation, BRE will evaluate whether to continue turbine operations, decommission the project, or retrofit the project with new turbines. The latter would require permit amendment and renewal.

We note that construction of phase I of the project occurred prior to the initiation of the ITP process; hence, it is not a covered activity. Phase I construction included construction of 67 turbines, associated infrastructure such as roads, staging area, concrete batch plant, underground and aboveground electrical collector system, a 14-mile-long overhead transmission line, a substation for connection of the wind turbines to the local transmission system, and an O&M building. Project facilities and infrastructure for both phases have been or will be placed on private land via long-term lease agreements between BRE and the respective landowner.

Covered Lands

The covered lands encompass 6,022 acres as described in section 1.4 and as depicted in Figure A-1 of the FHCP. These lands correspond to the geographic area in which covered activities will occur, and in which take authorized by the permit is reasonably likely to occur.

The project is located along Beech Ridge in Greenbrier and Nicholas counties, West Virginia, approximately 5 miles [8 kilometers, (km)] northwest of the town of Trout, approximately 7 miles (11 km) north-northwest of Williamsburg, and approximately 9 miles (14 km) northeast of downtown Rupert, West Virginia. The project is situated within the context of a 63,000-acre tract owned by an industrial timber management company. BRE leased approximately 30,600 acres from this landowner to plan for, develop, operate, and maintain the project and all associated infrastructure, including road right-of-ways. In addition, BRE has an agreement with a power company for access to the right-of-way of the existing 14-mile (23 km) and future 1.6-mile (2.6-km) long supplemental transmission line.

Within this large planning area, the ground disturbance footprint for the total project is approximately 521 acres distributed linearly over 30 miles of ridgeline. Of these 521 acres, 71 acres will be occupied by wind turbine pads, transmission line, meteorological towers, buildings,

roads, or other hard infrastructure for the operational life of the project. In addition, 148 acres of land will be temporarily disturbed during phase II construction, of which 127 acres will be reclaimed. Approximately 373 acres of land was temporarily disturbed during phase I construction, of which 311 acres was subsequently reclaimed. During decommissioning, the entire 100 turbine project and all associated infrastructure will be removed and the entire 521-acre footprint of the project will be reclaimed, with possible exception of some roads left in place at the request of the landowner.

HCP Commitments

The FHCP describes the impacts of take associated with the BRE's covered activities and includes measures to avoid, minimize and mitigate the impacts of incidental take of Indiana and Virginia big-eared bats. The FHCP also includes a Research, Monitoring, and Adaptive Management Plan (RMAMP) to ensure effectiveness of minimization measures as described in Section 5.2 and Appendix C. While there are a number of HCP commitments, the primary impact of the project to covered species is from wind turbine related fatalities. Therefore, the key minimization measure is a turbine curtailment strategy designed to achieve a 60 percent reduction in *Myotis* bat fatalities and 50 percent reduction in Virginia big-eared bat and other bat fatalities. Initially BRE will evaluate whether this can be achieved by feathering turbine blades such that they are not turning below a wind speed of 4.8 meters per second for 5 hours per night during the fall bat migration season. If the minimization measures prove to be in effective in achieving the bat fatality reduction objectives, then BRE has committed through the RMAMP to increase the cut-in speed levels, the nightly duration of applying the cut-in speeds, and/or extending the season of applying the measures until such point as the objectives are achieved.

To mitigate for the incidental take of Indiana and Virginia big-eared bats, within 2 years of ITP issuance, BRE will implement off-site conservation projects that meet specific criteria identified in the HCP (BRE 2013; section 5.3). For Indiana bats, BRE will purchase a priority winter hibernacula, or fund a hibernacula gating project threatened by human activity, either of which supports at least 53 Indiana bats; or purchase a summer maternity area. Lands will be purchased through fee simple acquisition, lease, or conservation easement, and ownership rights will be transferred to a Service-approved land manager who agrees to protect and manage the site in perpetuity. For Virginia big-eared bat, BRE will fund implementation of a gating project at a known winter or summer hibernaculum supporting at least 14 Virginia big-eared bats that is threatened by human activity.

III. Alternatives

We identified nine alternatives during preparation of the EIS. Of these, we carried forward and analyzed four alternatives in detail. We considered the remaining five alternatives but decided not to analyze them in further detail: (1) full project build-out with unrestricted operations and no ITP/HCP; (2) ITP with full implementation of the HCP and reduced permit term; (3) alternative project location; (4) alternative energy sources for electricity generation; and (5) ITP with full implantation of HCP and a reduced number of turbines with larger generating capacity per turbine.

As further explained in section 3.3 of the FEIS, and summarized below, we eliminated these five alternatives from further analysis for various reasons:

(1) Full project build-out with unrestricted operations and no ITP/HCP: This alternative would not meet the Service's purpose and need for avoiding and minimizing take of Indiana and Virginia big-eared bats. This alternative also would not meet the need to meet the requirements of the District Court Order that ruled that Beech Ridge Energy LLC obtain an ITP and implement an HCP in order to operate the project at night during the bat-active season. In the absence of an ITP, the project would be unlawful if take of either endangered bat occurred. Thus this alternative is not a reasonable alternative to consider for detailed analysis in the FEIS.

(2) ITP with full implementation of HCP and reduced permit term: We eliminated this alternative, in part, because it would not clearly reduce take over the long-term and would create an additional administrative burden for permit renewal. At the time of the request for permit renewal, greater certainty would be known about the effectiveness of the turbine operational curtailment measures to reduce bat fatalities. However, the annual review process outlined in the RMAMP, which would be implemented under any of the action alternatives, provides for a system of checks and balances for reducing uncertainty regarding the effectiveness of operational curtailment. This review process would implement procedures for evaluating the effectiveness of the HCP and ensuring that take levels specified in the ITP are not exceeded. Because it does not provide substantially different protection for listed bats beyond what is proposed in the retained alternatives, this alternative was dropped from further consideration.

(3) Alternative project location: We eliminated this alternative because alternative sites for the project in the region are unlikely to eliminate the potential for impacts to listed species. Sited in another location, impacts to listed bats would likely be the same or possibly even greater as the proposed action. In addition, because phase I is already built, it is not practicable to build the project in another location.

(4) Alternative energy sources for electricity generation: During the project development process, BRE evaluated the potential for using coal or natural gas technologies to generate electricity in West Virginia at a location in McDowell County that possibly could have reduced the potential for take of listed bats. However, using fossil fuels to generate electricity raises a significant number of additional potential environmental impacts, including significant concerns regarding air pollution and greenhouse gas emissions caused by fuel consumption and damage to water quality and wildlife habitat during fuel exploration and production. Additionally, BRE's purpose of and need for producing clean, renewable energy would not be achieved. Hence, this alternative was eliminated.

(5) ITP with full implementation of HCP and a reduced number of turbines with larger generating capacity per turbine: We considered but dismissed this alternative because there is little evidence to suggest that implementing fewer yet larger turbines effectively reduces bird or bat mortality. Conversely, it is hypothesized that taller turbines may result in higher bat fatalities. Hence, this alternative would not meet the Service's goal of effectively reducing bird and bat mortality.

Four alternatives were carried forward and analyzed in detail in the DEIS and FEIS. Below are brief descriptions of the no-action alternative and three action alternatives. In both documents we considered direct, indirect, and cumulative effects associated with each alternative. Further details are provided in section 5 of the DEIS and FEIS, including cumulative effects in section 5.16.

Alternative 1: No Action Alternative (*Environmentally-preferred Alternative*)

Under the no action alternative, the 67-turbine project would operate as described in the original court order and settlement agreement. Turbines would not operate 30 minutes before sunset to 15 minutes after sunrise from April 1 through November 15. Accordingly, the project would operate in such a manner that no take of endangered or threatened species would occur, thus precluding the need for an ITP. BRE would not construct and operate phase II (the proposed 33 turbines). There would be no risk to Indiana or Virginia big-eared bats associated with project operations. BRE would not implement steps to obtain off-site conservation to mitigate the potential take of Indiana and Virginia big-eared bats. Thus alternative 1 would have an overall neutral effect on the Indiana and Virginia big-eared bat: no take would occur, and no mitigation or other conservation measures would be implemented specifically for Indiana or Virginia big-eared bats. In addition, there would be no unlisted bat mortality because turbines would not operate at night during the bat active season. This alternative [67 turbines with 100.5 megawatt (MW) nameplate capacity) has the potential to generate approximately 254,000 megawatt hours (MWh) of electricity per year with operating restrictions.

Under the no action alternative, BRE would implement their avian protection plan (APP, found in Appendix B of FEIS). Prior to implementing the APP, we estimate the no-action alternative would kill roughly 400 birds per year, based on a regional average of bird mortality rates. Under the no action alternative, BRE would conduct 3 years of post-construction and adaptive management studies as part of their existing West Virginia Public Service Commission (WVPSC) siting certificate for phase I. Post-construction monitoring would determine whether turning turbines off at night from April 1 through November 15 would benefit birds, which is currently unknown. As specified in the APP, if the project causes significant levels of bird mortality and adaptive management techniques are proven effective and economically feasible in reducing such mortality, BRE would make a good faith effort to implement facility-wide adaptive management strategies to reduce bird mortality levels. However, if during monitoring, operational restrictions are not effective at avoiding and minimizing significant impacts to migratory birds, BRE will consider the potential for off-site mitigation to offset impacts to affected species of migratory birds, including possible off-site habitat preservation and restoration.

The no action alternative poses some risk of mortality to eagles. Prior to implementing minimization measures for eagles in BRE's APP, the Service's eagle take model predicts that 80% of the time annual project fatalities would be 0.18 golden eagles or fewer, suggesting that golden eagle collision fatality risk is moderate to high (i.e., 1 or fewer fatalities predicted to occur at the project site every 5 to 6 years on average). The model predicts that 80% of the time annual project fatalities would be 0.03 bald eagles or fewer, suggesting that a bald eagle fatality risk is low (i.e. 1 or fewer fatalities predicted to occur at the project site every 33 to 35 years on average, which is longer than the operational life of the project). The Service anticipates that the

predicted risk of golden eagle take can be reduced to low, primarily by reducing sources of eagle attraction, such as perches and carrion on-site. Under this alternative BRE would implement measures in its APP to reduce eagle perches and carrion on-site. The APP also includes post-construction monitoring and adaptive management, including mitigation, in the event of an eagle collision.

Alternative 1 meets the Service's goals and objectives for protecting and conserving the Indiana bat and Virginia big-eared bat and their habitats in context of the project for the continuing benefit of the people of the United States. Under this alternative, the project operations do not pose risks to listed bats because the turbines are turned off at night during the bat-active season for the life of the project. The no action alternative includes monitoring of bird fatality and implementation of measures to reduce and mitigate for mortality of eagles and measures to reduce and mitigate for significant mortality of other migratory birds should it occur. The no action alternative would be the alternative implemented if BRE's permit application does not meet permit issuance criteria, and it is not possible to remedy such deficiencies through permit terms and conditions BRE agrees to implement.

Alternative 2: Proposed Action – ITP with Full Implementation of Habitat Conservation Plan (*Preferred Alternative*)

Under alternative 2 (proposed federal action), the Service would issue a 25-year ITP pursuant to section 10 (a)(1)(B) of the ESA that would authorize the BRE to take Indiana and Virginia big-eared bats in association with:

1) construction of up to 33 additional turbines and associated infrastructure (phase II),
2) operation of up to 100 turbines (the existing 67 phase I turbines plus up to 33 additional phase II turbines), and
3) eventual decommissioning of the entire project.

BRE would implement an HCP that includes:

1) minimization measures to reduce take of listed bats through turbine feathering at a raised cut-in speed from July 15 through October 15;
2) off-site conservation measures to mitigate the impacts of taking listed bats; and
3) an RMAMP to test and measure the effectiveness of turbine operations in reducing listed bat mortality.

Under alternative 2, BRE also will implement an APP similar to the no action alternative. Turbine operating restrictions imposed by the court order, and a subsequent settlement agreement, and modified stipulation would be lifted and more energy would be generated than the no action alternative. Alternative 2, consisting of a total of up to 100 turbines with a nameplate capacity of up to 186 MW, has the potential to generate around 615,000 MWh of electricity per year with operating restrictions.

About 148 acres of land will be temporarily disturbed during construction of the 33 additional turbines and associated infrastructure. The occupied footprint of phase II will be approximately 21 acres for the 25-year duration of the ITP. Together with phase I, the project footprint for the

100-turbine wind facility will be 71 acres. BRE predicts that the ITP will need to be in effect for 25 years to address the time from start of project construction through decommissioning.

To construct up to 33 additional turbines, approximately 148 acres of tree clearing will occur in the expansion area. To avoid potential take of roosting Indiana bats, BRE will limit tree-clearing to the period between November 15 and March 31, except that up to 15 acres may be cleared between April 1 and May 15 or between October 15 and November 14. The additional 30 to 45 days are needed to provide BRE flexibility should weather, deep snow, or ice prevent clearing or create safety issues for construction workers. If tree-clearing is necessary during either of these periods, BRE will retain a qualified wildlife biologist to conduct a survey for potential roost trees prior to clearing and confirm that they are not occupied by roosting Indiana bats. If trees are found to be occupied, BRE will mark the occupied trees and delay removal until trees are unoccupied, thus avoiding direct mortality of Indiana bats.

The BRE turbine curtailment plan includes feathering all turbines below the 4.8 m/s cut-in speed beginning at sunset for a period of 5 hours from July 15 through October 15. In addition, BRE will implement the RMAMP, an adaptive management strategy that uses post-construction monitoring to assess whether the curtailment plan is effective in achieving 60% annual reduction in *Myotis* bat fatalities and 50% annual reduction in fatalities of all other bats The RMAMP also includes researching the potential for additional reductions in bat fatality through several modifications to the curtailment plan (e.g., increased cut-in speeds, full-night curtailment, and longer seasons of curtailment). If the minimization measures prove to be ineffective in achieving 60% annual reduction in *Myotis* fatality and 50% annual reduction in all other bat fatality, BRE has committed through the RMAMP process to increase the cut-in speed levels, the nightly duration of applying the cut-in speeds, and/or extending the season of applying the curtailment measures until such point as the biological goals and objectives are achieved (USFWS 2013b, Appendix C: RMAMP, Section 5.2.1). BRE's curtailment plan will be modified only with the written agreement of the Service.

Exceptions to the curtailment plan will be those turbines that are part of the curtailment study that will be initiated in the first year of the ITP term in which 10 turbines will operate at 4.8 m/s from sunset to sunrise and 10 turbines will operate at 3.5 m/s 24 hours per day (control). These 20 turbines will be compared directly to 10 different turbines that will operate as described for the curtailment plan. The number of control and treatment turbines in years 2 and 3 will be determined based on the results of the study in the previous year(s).

Implementation of the proposed action with avoidance and minimization measures is estimated to kill 53 Indiana bats, 14 Virginia big-eared bats, 31,000 unlisted bats, and 600 birds cumulatively over the 25-year ITP term. As mitigation, BRE will be implementing conservation projects intended to offset the anticipated incidental take of Indiana and Virginia big-eared bats that may occur during project implementation. For Indiana bats, the mitigation project options are: 1) to purchase priority winter hibernacula supporting at least 53 Indiana bats, 2) to gate an occupied cave threatened by human disturbance, supporting at least 53 Indiana bats, or 3) to purchase summer maternity areas. Lands will be acquired through fee simple acquisition, lease, or conservation easement, and transfer ownership rights to a Service-approved land manager who agrees to protect and manage the site in perpetuity (BRE 2013; section 5.3). For Virginia

big-eared bat, the mitigation project will be to implement a cave gating project at a known hibernaculum supporting at least 14 Virginia big-eared bats that is threatened by human activity (BRE 2013; section 5.3). Specific criteria for these projects are more fully outlined in the HCP. The mitigation projects are intended to eliminate threats, increase the survival probability of the Indiana and Virginia big-eared bats that overwinter in hibernacula, and maintain and in some cases improve reproductive success at the mitigation sites.

In addition, under this alternative the HCP (section 8.2) and implementing agreement account for specific changed circumstances, which trigger procedures or changes in the conservation plan to adjust to new information or contingencies. Changed circumstances include:

- Elevated annual take of covered species due to changing environmental conditions;
- Indiana bat or Virginia big-eared bat population declines or catastrophic population failure due to White Nose Syndrome;
- Listing of additional bat species, such as eastern small-footed bat (*Myotis leibii*), northern long-eared bat (*M. septentrionalis*), and little brown bat (*Myotis lucifugus*) due to population declines;
- Changed technology/techniques developed to avoid or minimize bat mortality from wind turbines;
- Detection of an Indiana bat maternity colony in or within 2.5 miles of the project, or discovery during post-construction monitoring of a dead female Indiana bat or juvenile during the maternity season (May 15 to August15).

BRE, in coordination with the Service, will follow the procedures outlined in the HCP (section 8.2) and will propose additional or alternative measures as the need arises to deal with changed circumstances. Such measures include changes in the turbine cut-in speeds; changes in timing of turbine operations; selected curtailment of specific turbines causing significantly higher bat mortality; operational changes based in part on other environmental factors such a temperature; deployment and testing of bat deterrent technology; and permit amendments.

The proposed action includes implementing the APP as described for the no action alternative. The proposed action would include construction and operation of up to 33 additional turbines, resulting in higher bird mortality (roughly 600 birds per year) than the no action alternative (roughly 400 birds per year).

Prior to implementing minimization measures for eagles in BRE's APP, the Service's eagle take model predicts for the 100-turbine project that 80% of the time annual fatalities would be 0.34 golden eagles or fewer, suggesting that 1 or fewer golden eagle collision fatalities are predicted to occur at the project site every 3 to 4 years on average (moderate to high risk). Likewise, prior to implementing APP minimization measures, the model predicts for the 100-turbine project that 80% of the time annual fatalities would be 0.052 bald eagles or fewer, suggesting that 1 or fewer bald eagle fatalities is predicted to occur at the project site every 19 to 20 years on average (moderate to high risk). The Service anticipates that the predicted moderate to high risk of bald eagle take can be reduced to low, with implementation of measures specified in the APP such as by reducing sources of eagle attraction, such as perches and carrion on-site. It is less certain how

much the risk of take of golden eagles would be reduced by these minimization measures. If an eagle fatality were to occur, the ITP could be revoked or suspended, depending on the specific circumstances, per our prosecutorial discretion authority.

The proposed action meets the Service's purpose and need for providing a means to conserve the habitats and ecosystems of the Indiana bat and Virginia big-eared bat. The proposed action's compensation for the project impacts to covered species is to be achieved through suitable mitigation that will satisfy the goals and objectives outlined for the off-site conservation. The proposed action would serve BRE's need to meet the requirements of the district court order that ruled that BRE obtain an ITP and implement an HCP to operate the project at night during the bat active season.

The proposed action includes extensive practicable means to avoid or minimize potential adverse effects to the human environment through implementation of the following:

1) Avoidance, minimization, and conservation measures specified in the FHCP and IA;
2) Avoidance, minimization, monitoring, and response measures specified in the APP; and
3) Avoidance and minimization measures, and best management practices specified for each resource in the FEIS (section 5) and FHCP (section 2.1.4.4) including but not limited to cultural resource protection, wetland and stream protection, soil erosion control, restoration and reclamation of restored areas, toxic spill prevention and containment, waste control, traffic control, fire suppression and control, avoidance and minimization of stream, wetland, and riparian impacts, minimization of air quality and noise impacts, noxious weed management, surface and ground water protection, prohibitions on hunting, fishing, and dogs and firearms by BRE employees and contractors on the project area, and visual screening buffers.

Alternative 3 – Additional Covered Species Addressed in ITP and Habitat Conservation Plan

Under the additional covered species alternative, the Service would issue a 25-year ITP pursuant to section 10 (a)(1)(B) of the ESA for BRE's project. The project would be constructed as described for the proposed action. The 33 phase II turbines would be constructed, and all 100 turbines operated and eventually decommissioned. Like the proposed action, alternative 3 would implement BRE's RMAMP, as well as the APP, to minimize and monitor bat and bird mortality.

Under alternative 3, the HCP would include as covered species the Indiana bat, Virginia big-eared bat, and 3 additional bat species, little brown bat, northern long-eared bat, and eastern small-footed bat. These species would be treated as if they were currently listed under the ESA. Should these species be listed as endangered or threatened under the ESA within the period of the ITP (25 years), the ITP would automatically cover these species for take without requiring an ITP amendment.

Because reproductive individuals of the three currently unlisted bat species have been captured in mist-nets on-site, it is assumed the project area provides maternity areas for these bats. Upon issuance of the ITP, project operations would be modified to avoid and minimize mortality of the three additional covered species and to reduce impacts to breeding individuals for the duration of

the ITP (25 years). Habitat protection would include areas to benefit the three additional covered species, as well as Indiana and Virginia big-eared bats. These avoidance, minimization, and mitigation measures would occur regardless of whether any of the three unlisted bat species are listed during the ITP term.

Under this alternative, BRE's curtailment plan and RMAMP would be modified to implement a 6.5 m/s cut-in speed as opposed to 4.8 m/s as the initial rate for curtailment. Furthermore, all 100 turbines would operate at 6.5 m/s from 30 minutes before sunset through 15 minutes after sunrise during the period April 1 through October 15 to cover the full season of all bat activity around the project, thus reducing potential take of covered species and all bat species. Alternative 3 specifies the goal for reducing overall bat mortality by at least 76%. Adaptive management would be used to address achieving greater than or equal to 76% reduction in all bat mortalities. Due to the expanded curtailment regime, implementation of alternative 3 would generate less electricity than the proposed action yet more than the no action. Alternative 3 (100 turbines with up to 186 MW nameplate capacity) has the potential to generate approximately 473,000 MWh of electricity per year with operating restrictions.

Alternative 3 would include efforts to locate roost sites and delineate foraging areas of the 3 additional species. Delineated habitats would be used to evaluate specific areas of the project that may pose the greatest risks to covered species. Hence, under alternative 3 the curtailment plan may be further modified to implement expanded avoidance and minimization measures to protect roosting and brooding sites within and proximal to the project area. On-site or near-site protection and management of bat maternity areas would be implemented, as well as off-site protection of bat hibernacula.

The 100-turbine project under this alternative would operate on a more restrictive regime and is predicted to kill 76% fewer bats than if operating with no curtailment. Implementation of the alternative 3 is estimated to kill27 Indiana bats, 6 Virginia big-eared bats, and roughly 16,000 unlisted bats over the 25-year ITP term. We estimate that bird mortality would be similar to that estimated for the proposed action, 600 birds annually. Risk to eagles would be as described for the proposed action.

Alternative 3 meets the Service's purpose and need for providing a means to conserve the habitats and ecosystems depended on by the 5 covered species within the context of the project. Alternative 3 includes compensation for the unavoidable project impacts to covered species; compensation would be achieved through suitable mitigation that would satisfy the goals and objectives for on-site and off-site conservation. Alternative 3 meets the Service's purpose and need to ensure the long-term survival of Indiana and Virginia big-eared bats through protection and management of the species and their habitat within the context of this project.

This alternative (100 turbines with 186 MW nameplate capacity) has the potential to generate approximately 473,000 MWh of electricity per year with operating restrictions. Alternative 3 would meet BRE's need for completing the requirements of the district court order ruling that BRE must obtain an ITP and implement an HCP to operate the project at night during the bat active season.

We developed alternative 3 as a mechanism for providing a meaningful comparison of consequences among possible permit approaches, and to facilitate future NEPA compliance should any of the three unlisted bat species be listed in the future and should BRE decide to apply for a permit amendment to add any of these species to its permit for take coverage. However, its design depends on science that is dynamic and changing and uncertainty as to whether an applicant could employ the measures described. Thus it would be premature to definitively determine what measures would be required as part of a permit application for these 3 unlisted species, the needs of which may change over time. As further explained below, the Service has limited discretion in responding to a permit application, and BRE has not requested take coverage for currently unlisted species. Therefore, this alternative would not satisfy the Service's need to respond to BRE's current ITP application.

Alternative 4: ITP with Full Implementation of Habitat Conservation Plan for Phase I Only

Under alternative 4, the Service would issue a 25-year ITP for Indiana and Virginia big-eared bats pursuant to Section 10 (a)(1)(B) of the ESA for operating and decommissioning the existing 67-turbine project. The 33 phase II turbines would not be constructed. The phase I only alternative would include the full implementation of the HCP as described for the proposed action. The curtailment measures would be the same as for the proposed action alternative; however, the minimum number of listed bats protected at off-site mitigation sites would be less than the proposed action, commensurate with reduced mortality of listed bats under alternative 4. Bat and bird mortality would be reduced by implementing the RMAMP and the APP. This alternative (67 turbines with 100.5 MW nameplate capacity) has the potential to generate approximately 331,000 MWh per year with operating restrictions.

Under alternative 4, the estimated number of bat fatalities for 67 turbines would be lower than the proposed action (100 turbines), yet higher than alternative 3 (100 turbines) with more restrictive operations. Implementation of alternative 4 is estimated to kill 32 Indiana bats, 8 Virginia big-eared bats, and 21,000 unlisted bats over the 25-year ITP term. We estimate that bird mortality would be similar to that estimated for the no action alternative, 400 birds annually. Risks to bald and golden eagles would be as described for the no action alternative.

Alternative 4 meets the Service's purpose and need for providing a means to conserve the habitats and ecosystems depended on by the covered species within the context of the project. Alternative 4 includes compensation for the unavoidable project impacts to covered species; compensation would be achieved through suitable mitigation that would satisfy the goals and objectives for off-site conservation. Alternative 4 meets the Service's purpose and need to ensure the long-term survival of Indiana and Virginia big-eared bats through protection and management of the species and their habitat within the context of this project.

Alternative 4 would serve BRE's need to meet the requirements of the district court order that ruled that BRE obtain an ITP and implement an HCP to operate the project at night during the bat active season. However, BRE has expended substantial time and money to apply for an ITP, as well as a state siting certificate for the construction and operation of up to 33 additional turbines, and received approval from the WVPSC for the additional turbines in June 2013. BRE also has obtained the property leases necessary for the phase II expansion and continues to

pursue other various federal, state, and local permits and approvals. Given BRE's substantial investment of time and resources in pursuing an ITP that includes the expansion area, alternative 4 would not satisfy the Service's need to respond to BRE's request for an ITP for a 100-turbine project.

Cumulative Effects

In our FEIS, we analyzed the cumulative effects on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such actions (FEIS section 5.16). We considered activities such as timber harvest, strip mines, natural gas extraction, development, road construction, transmission lines, and wind energy projects, with a particular focus on bird and bat mortality. For context, we evaluated the cumulative effects of the four alternatives on bird and bat mortality from turbine operation when added to effects of other wind power projects operating or under construction at the local and regional scales. We compared relative effects of wind power to other sources of bird and bat mortality and evaluated the significance of such mortality to bird and bat population trends when known.

Birds

None of the alternatives considered is expected to cause naturally occurring populations of common birds to be reduced to numbers below levels for maintaining viability at local or regional levels. Project bird mortality will contribute cumulatively to other sources of bird mortality, such as other wind projects. Species with high collision rates that are already compromised by other factors and exhibiting decreasing trends would be affected more than common species with secure populations, yet the effect is currently predicted to amount to a fraction of a percent of any population of a bird species of conservation concern. The small percentages of wind power mortality are a cumulative effect which contributes slightly to many other sizeable sources of human-caused bird mortality. However, the small percentage contribution from wind power does not diminish the need to reduce sizeable sources of bird mortality when practicable.

The APP for all alternatives includes a monitoring plan and adaptive management framework designed to monitor bird mortality for the life of the project to test the effectiveness of curtailment in reducing bird mortality, and to respond to significant bird mortality should they occur through additional monitoring, changes in operations, and/or off-site mitigation or research.

Bats

Under the No-Action Alternative (Alternative 1), cumulative mortality of bats would not be significant at the regional scale. All 3 action alternatives will contribute cumulatively to effects associated with bat mortality. By 2037, the cumulative impact of wind power projects is predicted to result in mortality of roughly 730,000 bats within the states of West Virginia, Maryland, Pennsylvania, Virginia, and North Carolina.

The effect of cumulative mortality on tree-roosting migratory bat populations is highly uncertain because estimates of current population sizes are unknown. However, their mortality at wind power projects is significantly higher than that experienced by cave-dwelling bats and is considered an additive effect to other stressors adversely affecting population levels (such as disease, predation, and habitat loss and degradation which decreases reproduction and survival. The cumulative effect of wind power mortality on slowly reproducing cave-dwelling bats is also additive to already high mortality caused by white nose syndrome.

Bat mortality could be reduced by 50 percent or more if all wind power projects implemented effective curtailment strategies. The proposed action, and alternatives 2 and 3 include curtailment measures to significantly reduce the individual project's contribution to cumulative bat mortality, and to mitigate for it through off-site habitat protection in perpetuity that removes threats of human disturbance, logging, and development.

IV. PUBLIC INVOLVEMENT

As summarized below, the Service has solicited stakeholder involvement throughout the entire process for preparing the FEIS.

On July 22, 2010, the Service's initiated the formal scoping process with the publication of the notice of intent to announce the initiation of a 30-day public comment period, intent to conduct a NEPA analysis, and hold a public informational meeting (75 FR 42767-42770). The Service published an additional notice on August 27, 2010 announcing an extension of the public comment period an additional 30 days (75 FR 52778). The Service also conducted outreach through press releases and public notification to inform interested parties or those potentially affected by the proposed action and to request comments on the scope of the NEPA analysis. Together with BRE and the Service's third-party NEPA contractor, the Service held a scoping meeting in Rupert, West Virginia, on August 9, 2010. Comments resulted in the identification of a number of issues related to the project and the associated HCP.

In September 2011, the Service consulted with the U. S. Environmental Protection Agency, whose staff reviewed and commented on the preliminary DEIS.

During the EIS development, the Service and BRE consulted with staff of the West Virginia Division of Culture and History (WVDCH) State Historic Preservation Office (SHPO) and members of Native American tribes pursuant to NEPA, Section 106 of the National Historic Preservation Act (NHPA), and the American Indian Religious Freedom Act. The Service contacted all known organizations identified as potential consulting parties under these cultural statutes and regulations by letter, follow-up phone calls, and emails, as necessary to explain the nature of the proposed project and seek additional input on the identification and evaluation of archaeological and historic resources. This effort resulted in a memorandum of agreement signed by the Service, BRE, SHPO, and Catawba Indian Nation to address potential adverse effects to historic properties and archaeological resources (Appendix K to the FEIS).

Release of Draft EIS and HCP

On August 24, 2012, the Service published the Federal Register notice indicating the DEIS was available for comment for 60 days. In addition, during May 2012, prior to Service publication of the Federal Register notice, BRE made its DHCP and IA available on the company's website for early public review and comment. BRE sent letters to individuals on the Service's DEIS mailing list and published a notice in local newspapers of the availability of the DHCP and IA.

Public Comments

The Service received 42 comment letters on the DEIS and DHCP of which 20 were form letters. Letters were from 2 federal agencies, 1 tribe, 8 non-governmental organizations, and 31 individuals. NEPA requires that the action agency consider and respond to all substantive comments received during the review and comment period. Comments on the DEIS and DHCP and the Service's responses to comments are provided in a companion document to the FEIS (Volume III). Alternative 2 as presented in the DEIS was modified based on public comments received during the 60-day comment period and from internal review by Service staff. In response to these comments, the Service worked with BRE to clarify sections of the HCP and EIS, include new information about the environmental baseline and effects to the environment, and to develop additional practical measures to further avoid and minimize harm to the environment.

Substantive modifications to both the FEIS and FHCP in response to public comments and the Service's analysis are listed below. Practical measures which were added to the FHCP and FEIS to further avoid and minimize harm to the environment are listed first in italics.

FHCP

- *In the event that BRE exercises an option to cut up to 15 acres of trees during the Indiana bat active season, FHCP reflects a commitment to use a qualified surveyor to check for roosting Indiana bats and delay tree-cutting until juvenile bats can fly.*
- *Indicates Beech Ridge Energy II, LLC will work with the Service during micrositing of phase II turbines to adjust, where feasible, the location of turbines to minimize impacts to covered species and their habitat.*
- *Incorporates measurable objectives to ensure the FHCP achieves a 60%[1] annual reduction in Myotis fatalities and 50% annual reduction in Virginia big-eared bat fatalities and all other bat species.*
- *Presents revised and clarified annual take thresholds for Indiana bat and Virginia big-eared bat, which if met, require BRE to notify and confer with the Service to determine whether adjustments to the curtailment strategy, or additional operational changes are required to ensure the project remains within authorized take levels.*
- *Revises and lowers the Indiana bat take request from 70 to 53 individuals over the 25-year life of the project based on post-white nose syndrome bat species composition and Service modeling of the amount of project take that could be sustained without harming local populations.*
- *Presents a clear white-nose syndrome trigger for changed circumstances and provides an expanded range of responses in the event the trigger is met.*

[1] The DHCP proposed 50% annual reduction of Indiana bats, Virginia big-eared bats, and all other bats.

- Reflects potential benefits of the project on job creation, tax base, and clean energy production.

FEIS

- *Incorporates into the project description all additional practical measures added to the HCP (listed above) and analyzes their effects.*
- *Reduces bird mortality through a commitment by BRE to install bird diverters on existing guyed meteorological towers (as reflected in a change to their APP).*
- *Discusses and provides as an appendix the signed memorandum of agreement for protection of cultural resources for the phase II expansion.*
- Estimates for each alternative the annual power generated based on estimated hours of operation and typical wind project capacity factor.
- Clarifies the adequacy of the curtailment plan and RMAMP in meeting measurable biological objectives.
- Clarifies the adequacy of the FHCP in meeting the maximum extent practicable permit issuance criteria.
- Uses new information from wind power monitoring studies to revise the average bird and bat fatality rates and revise predictions of bird and bat fatality caused by the project and cumulatively from other projects.
- Incorporates the latest 2013 data on Indiana bat populations and updated white-nose syndrome trends rangewide and by recovery unit
- Reflects 5 known Indiana bat fatalities to date at wind power projects.
- Clarifies the Service's view of that adding newly listed species to the ITP generally is treated as a major permit amendment requiring additional analysis NEPA analysis and public comment.
- Explains how the Service used newly available eagle survey results from the project to model risk of bald and golden eagle take. Explains the Service has advised BRE of available permitting options.
- Explains what is currently understood about the effects of turbine size and other variables on bat and bird mortality.
- Clarifies what is currently understood about the degree to which mitigation for bats (curtailment and off-site mitigation) also benefits birds.
- Identifies and provides a rationale for the Service's preferred alternative and the environmentally preferred alternative.
- Adds an additional alternative that was considered but dismissed from detailed analysis: larger but fewer turbines.
- Presents the results of the project's post-construction monitoring results, implementing the 6.9 m/s interim operation strategy during 2012.
- Clarifies language related to Clean Water Act regulations per the U. S. Army Corps of Engineers comments.
- Throughout the FEIS, clarifies the federal permitting action is ITP issuance.

FEIS and FHCP

- Both include new information from additional wind power monitoring and curtailment studies that became available after the close of the comment period on the draft documents.

Release of Final EIS and HCP

The FEIS, FHCP, IA, and responses to comments were made available on September 13, 2012. The Service solicited stakeholder review of the adequacy of our responses to comments during the 30-day waiting period phase of the FEIS through Federal Register publication (78 Federal Register 56729), and letters to commenters. Electronic copies of the FEIS, HCP, and associated documents were made available on the internet at the following websites:

1) www.regulations.gov,
2) www.fws.gov/westvirginiafieldoffice/beech_ridge_wind_power.html, and
3) http://yosemite.epa.gov/oeca/webeis.nsf/EIS01/87D330A7B608301E85257BF0001C0563?opendocument.

Hard copies of the FEIS were made available at three local libraries and the Service's West Virginia Field Office. Comments and the Service responses on the FEIS are provided in Appendix A of this ROD. We received no substantive comments on the FEIS during the 30-day waiting period, though this was also not considered a formal comment period. The EPA responded in a letter dated September 23, 2012 (sic)[2] and received by the Service on September 30, 2013, that the FEIS provided adequate responses to their October 12, 2012 comments on the DEIS.

V. DECISION AND RATIONALE

Following the public review and consideration of comments received, the Service has selected an environmentally preferred alternative and a preferred alternative as described below.

Environmentally Preferred Alternative

NEPA regulations require Federal agencies to specify "the alternative or alternatives which were considered to be environmentally preferable" (40 CFR 1505.2(b)). The environmentally preferred alternative is the alternative that would promote the national environmental policy expressed in Section 101(b) of NEPA. Ordinarily, this means the alternative that causes the least damage to the biological and physical environment and that best protects, preserves, and enhances historic, cultural, and natural resources (CEQ Forty Most Asked Questions, Question 6a; 46 CFR 1500-1508, 46 C.F.R. 18026-18038).

Based on the description of the alternatives considered in detail in the FEIS and this ROD, the Service has selected alternative 1 (No Action: No Take/No ITP/No HCP) as the environmentally preferred alternative. Under this alternative phase II of the project would not be constructed; hence there would be no new ground disturbance from construction of up to 33 additional turbines and thus there would be no impact to physical aspects of the environment, including historic, cultural, and natural resources. Under this alternative the existing 67 phase I turbines

[2] EPA's comment letter on the FEIS inadvertently was dated 2012 instead of 2013.

would be turned off at night during the bat active season, resulting in no mortality of listed or unlisted bats. Bird mortality would occur but would be 33% less than that of a 100-turbine project (alternatives 2 and 3). Under its APP, BRE would monitor bird mortality through an adaptive management framework, and would reduce and mitigate for it should significant effects to any species of bird occur. Largely through avoidance of impacts, this alternative causes the least damage to natural resources. However, we also recognize that this alternative would produce the least amount of renewable energy.

Preferred Alternative

The agency's preferred alternative is the alternative which the agency believes would fulfill its statutory mission and responsibilities, giving consideration to economic, environmental, technical and other factors (CEQ Forty Most Asked Questions, Question 4a; 46 CFR 1500-1508, 46 C.F.R. 18026-18038).

In accordance with the NEPA (40 CFR §1502.14(e)) and ESA regulations (43 CFR 17.22 (b) (2), the Service has identified the proposed action – alternative 2 (ITP with Full Implementation of Habitat Conservation Plan) as the preferred alternative. The proposed HCP (alternative 2) was selected over the environmentally preferable alternative because it meets all the ITP issuance criteria, including assurances that funding will be secured to fully implement the HCP. While alternative 1 may be environmentally preferable, we conclude that the HCP commitments under the proposed action (alternative 2) will:

- minimize and mitigate the effects of incidental take of the Indiana and Virginia big-eared bats,
- protect/conserving/enhance Indiana and Virginia big-eared bats and their habitats for the continuing benefit of the people of the United States,
- provide a means and take steps to conserve the ecosystems upon which these species depend,
- and ensure the long-term survival of Indiana and Virginia big-eared bats through protection and management consistent with the ESA, NEPA, and other applicable federal laws and regulations.

The selection of the proposed action (alternative 2) as the preferred alternative is also based on the following factors which are driven by our wildlife conservation mission, priorities, and statutory responsibilities (ESA, Bald and Golden Eagle Protection Act, and Migratory Bird Treaty Act) to conserve listed bats and migratory birds while giving considering to economic, environmental, technical and other factors:

> *Alternative 1 (No Action/No ITP).* This alternative would result in no new ground disturbance or construction and thus would have no effect to physical aspects of the human environment. It would result in no mortality of listed and unlisted bats, and would have 30% less mortality of birds than alternative 2 (proposed action). As further explained below in section 3.4.2, it is the least damaging environmental alternative. This alternative is unique in that it reflects a court order which enjoined BRE from constructing up to 33 additional turbines and directed BRE to operate the existing 67-turbine project in such a way as to avoid take of listed bats until such time as BRE

obtains an ITP. Because of the operating restrictions, this alternative produces the least energy of all alternatives.

Alternative 2 (Proposed Action/ITP with Implementation of the HCP). This alternative reflects BRE's application for a permit to take listed bats incidental to otherwise lawful construction of up to 33 additional turbines and operation of all 100 turbines. Construction of new turbines and associated infrastructure would result in 148 acres of ground disturbance, causing relatively minor short-term physical impacts to the human environment (noise, water, and air pollution, etc.). This alternative is designed to meet biological objectives and permit issuance criteria while fulfilling agency statutory mission and responsibilities. Among all alternatives, it has the greatest overall economic impact in terms of energy produced and jobs created.

Alternative 3 (Additional Covered Species Addressed in the ITP and HCP). This alternative would result in 148 acres of ground disturbance associated with construction of up to 33 additional turbines and associated infrastructure. Thus it would have similar effects to physical aspects of the human environment as the proposed action. Alternative 3 would provide take coverage for three additional species of bats should they be listed during the permit term. It has fewer impacts to listed and unlisted bats than alternative 2, an equivalent impact on birds, and greater habitat protection and enhancement than alternative 2. Because the three unlisted bat species are known to be breeding on or near the project site, avoidance, minimization and mitigation measures are greater than alternative 2 which presumes impacts to listed bats primarily during migration. Because of these biological considerations, this alternative would result in 23% less energy production than the proposed action, while creating an equivalent number of jobs.

Alternative 4 (ITP with Full Implementation of Habitat Conservation Plan for Phase I Only). This alternative would result in no new ground disturbance or construction and thus would have no effect to physical aspects of the human environment. Although alternative 4 would have fewer impacts to listed bats, unlisted bats and birds than alternative 2 (proposed action), it also would have less habitat protection and enhancement than the proposed action. Among the action alternatives, it would have the smallest overall economic impact in terms of energy produced and jobs created.

We note that it may appear that alternative 3 (Additional Covered Species Addressed in ITP and Habitat Conservation Plan) would reasonably serve as the agency's preferred alternative because of greater reduction of bat fatality and mitigation for additional species than alternative 2 (proposed action). However, the applicant decides which species to include in a permit application. BRE's application for the two currently listed bat species and the HCP's curtailment plan (e.g., 4.8 m/s, feathering and the RMAMP) were designed to meet our biological objectives and permit issuance criteria. We developed alternative 3 to provide for a meaningful comparison of consequences among possible permit approaches. In addition, alternative 3 may facilitate future NEPA compliance should any of the three unlisted bat species be listed in the future and should BRE decide to apply for a permit amendment to add any of these species to its permit for take coverage.

Therefore, the Service has concluded that the proposed action (i.e., issuance of an ITP based on implementation of BRE's FHCP) is the preferred alternative because it best meets the agency purpose and need to conserve listed bats, and responds to an ITP application, while fulfilling our statutory mission and responsibilities and giving consideration to economic, environmental, and other factors. Selection of this alternative was informed by agency and public comments on the DEIS and DHCP and consideration of the alternatives and their environmental consequences disclosed in the DEIS and FEIS.

VI. CONCLUSION

Beech Ridge Energy LLC and Beech Ridge Energy II LLC have applied as co-permittees for an ITP for the Beech Ridge Wind Energy Project for incidental take of Indiana and Virginia big-eared bats. The applicants together developed an HCP that balances their need to operate a wind energy facility while complying with the district court order and ESA. The FHCP provides an extensive set of conservation measures that minimize take and mitigate for the impact of unavoidable incidental take of listed bats to the maximum extent practicable during the 25–year term of the Permit. The FHCP also includes research, monitoring, reporting, and an adaptive management strategy to track take; answer questions about the use of surrogate species in tracking take; determine the effectiveness of different turbine operational protocols in reducing take; validate the effectiveness of any changes made in the curtailment strategy; and verify BRE is carrying out the terms of the HCP, ITP and IA and that the authorized take limits are not exceeded. The Service's statement of findings for issuance of an ITP (USFWS 2013a) provides our determination that the FHCP meets the statutory criteria for issuance of a section 10(a)(1)(B) permit.

The ITP issued by the Service will include enforceable permit terms and conditions requiring implementation of the avoidance, minimization, mitigation, funding, and reporting conditions in the HCP, and IA, as well as other measures specified by the Service, or additionally required under our general permitting regulations (50 CFR Part 13).

As part of its ITP enforcement program, Service staff in the Division of Ecological Services will monitor BRE's compliance with the ITP, HCP, and IA, as well as track the HCP's progress and success. In addition, the Service's Office of Law Enforcement assists staff in the Division of Ecological Services with investigation and enforcement of ESA permit compliance issues, as well as violations of the Migratory Bird Treaty Act, Lacey Act, and Bald and Golden Eagle Protection Act. As such, staff will carefully evaluate work products submitted by BRE and their consultants to ensure compliance with the permit terms and conditions, and the effectiveness of the avoidance, minimization, and mitigation measures, as well as the quality and integrity of data collection, analysis, and reporting. Service staff will conduct periodic site visits as needed to evaluate permit compliance consistent with 50 CFR 13.21(e)(2).

In consideration of the extensive avoidance, minimization, mitigation, monitoring, and reporting requirements in the FHCP, IA, and APP as well as best management practices specified for each resource in the FEIS, we find, consistent with 40 CFR 1505.2c that all practicable means to avoid or minimize environmental harm from the selected alternative have been adopted.

VII. RECOMMENDATION OF PERMIT ISSUANCE

Based on this ROD and the statement of findings for issuance of an ITP (USFWS 2013a), I recommend approval and issuance of permit TE-16692B-0 to Beech Ridge Energy LLC and Beech Ridge Energy II LLC for incidental take of Indiana and Virginia big-eared bats in conjunction with the Beech Ridge Wind Energy Project.

Signature: Paul R. Phifer 12/5/13

Paul Phifer
Assistant Regional Director, Region 5
U.S. Fish and Wildlife Service

Date

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